

Bell Atlantic  
1300 I Street N.W.  
Suite 400W  
Washington, DC 20005

Fran Folgner  
Staff Manager - Federal Regulatory Filings  
(202) 336-7890  
Fax (202) 336-7858

00-20



March 17, 2000

Mr. Dale Hatfield  
Chief – Office of Engineering and Technology  
Federal Communications Commission  
445 12th Street, SW  
Room 7-C155  
Washington, DC 20554

Re: Final Service Outage Report

Dear Mr. Hatfield:

In accordance with the requirements in CC Docket 91-273, enclosed is the Final Service Disruption Report for the Bell Atlantic service outage that occurred on February 20, 2000 affecting Philadelphia, Pennsylvania.

Please call me if you have any questions about this report or other service outage issues.

Sincerely,

A handwritten signature in cursive script, appearing to read "Fran Folgner".

Enclosure

cc: R. Kimball  
K. Nilsson

**BELL ATLANTIC –PENNSYLVANIA**  
**FCC NETWORK DISRUPTION**  
**FINAL SERVICE DISRUPTION REPORT**

This Final Service Disruption Report is filed by Bell Atlantic on behalf of its telephone operating company, Bell Atlantic-Pennsylvania (BA-PA), in accordance with Section 63.100 of the Commission's Rules in the Second Report and Order in CC Docket 91-273, 9 FCC Rcd 3911 (1994), as revised by the Order on Reconsideration, released October 30, 1995, 10 FCC Rcd 11764 (1995). Bell Atlantic filed an Initial Report on February 20, 2000 notifying the Commission of an outage that occurred on that day affecting Philadelphia and its surrounding area.

On Sunday February 20, 2000 at 6:20 AM, the Pittsburgh Network Control Center (NCC) received an alarm for an LIU 7 33 (Line Interface Unit) and a service affecting fault on FBUS (Frame Transport Bus) 1TAP 33 in the Philadelphia Market DMS tandem (PHLAPAMK72T). A technician was dispatched to the office and, at approximately 8:00 AM, attempts to reload the LIU 7 failed twice. Indications were that two cards, one a processor card and the other a router card failed. Unaware that this failure was affecting the network, the technician made the LIU busy, requested that the cards be changed during safe time and departed about 9:00 AM. At the same time, the Network Service Assurance Center (NSAC) observed trunks going in and out of service from two Central Offices. The NSAC could not see trunks out of service at the tandem but did observe end office trunk problems in their traffic management system. Both the NSAC and NCC continued to investigate and analyze the trunk failures and at 11:00 AM, requested Electronic Systems Assistance Center (ESAC) assistance and dispatched a technician to the tandem office.

ESAC checked the Tandem from the Maintenance Administrative Port (MAP) channel and the switch appeared to be functioning. When ESAC checked the logging channel they noticed a high number of lost messages which indicated a switch problem. ESAC contacted NORTEL ETAS (Emergency Technical Assistance Services) for assistance. NORTEL isolated the FBUS Tap 33 but this did not correct the problem. At 1:00 PM, ESAC and ETAS had the technician replace the bad packs and reload the LIU7. This procedure did not correct the condition. The technician then unseated the cards in the LIU7 and the switch began reporting messages indicating bad data was being corrected by audits. The end office trunks restored and call blocking ceased at 1:40 PM.

Subsequently at 11:00 PM during safe time, Bell Atlantic and vendor personnel worked on the LIU7 33, replacing the processor pack, router pack and an updated version of the Bus interface card. Two Peripheral Module (PM) resets and two reloads were performed on the LIU7 33. The unit was restored to service by 2:00 AM on February 21, with no service affecting problems.

**Date of Incident:**

Sunday, February 20, 2000

**Time of Incident:**

06:21 AM

**Duration of Outage:**

7 Hours, 29 Minutes

**Geographic Area Affected:**

Center City Philadelphia and its surrounding areas

**Estimated Number of Customers Affected:**

The estimated number of customers affected by this incident is unknown.

**Type of Services Affected:**

Switched intraLATA and interLATA message trunks were affected by this incident.

**Estimated Number of Blocked Calls:**

Bell Atlantic estimates approximately 336,600 calls were blocked by this outage.

**Cause of the Incident, Including Name and Type of Equipment Involved and Specific Part(s) of the Network Affected:**

**- Root Cause Analysis:**

Direct Cause: Failure of a hardware element in LIU7.

Affected Element: LIU7 33 of the tandem switch.

Outage Cause: Still under investigation by the vendor. An amended Final Disruption Report will be submitted when the information becomes available.

Duration Cause: The network surveillance systems produced inconsistent indications of the trouble condition that hampered analysis of the problem. The tandem showed the trunks in service and the end offices showed trunks out of service.

**Root Cause Finding:**

The root cause of this failure is undetermined pending investigation by NORTEL.

**Methods Used to Restore Service:**

The circuit packs were replaced and reseated to restore service to the LIU7.

**Current or Proposed Company Practices Related to this Outage:**

None

**Network Reliability Council "Best Practices" That Relate To This Incident:**

None

**Describe How The NRC Recommendation(s) Could Have Prevented This Outage:**

None

**Steps Taken to Prevent Recurrence:**

- Bell Atlantic has returned the circuit packs to NORTEL for analysis. In addition, Bell Atlantic has requested NORTEL to determine why the Bus interface card was not identified on the fault list and why this problem caused the reaction it did to the network. In addition, Bell Atlantic has requested NORTEL to explain why the circuit packs had to be reseated before the problem subsided.
- Bell Atlantic NCC and Maintenance Engineering is investigating to determine why trunks appear to be in service in the tandem and out of service in the end offices.
- Local management has reviewed with the technicians that; both the MAP channel and logging channel must be checked when analyzing switch troubles.

FEB 20 2000 15:07 FR BELL ATL NSAC

973 621 7112 TO 12024182812

P.01/01

**BELL ATLANTIC  
FCC NETWORK DISRUPTION  
INITIAL REPORT****TICKET #: 8AQ-UJE**

1. **DATE AND TIME OF INCIDENT:** 02/20/2000 06:21:00 AM  
2. **GEOGRAPHIC AREA AFFECTED:** Philadelphia Area
3. **MAXIMUM NUMBER OF CUSTOMERS AFFECTED:** to be determined
4. **TYPE OF SERVICES AFFECTED:**  
☐ EMERGENCY-SERVICE ☒ INTERLATA ☐ OTHER  
☐ INTRALATA ☐ 800 SERVICES
5. **DURATION OF OUTAGE:** 07:29:00
6. **ESTIMATED NUMBER OF BLOCKED CALLS:** to be determined
- 7A. **TYPE EQUIPMENT:** DMS 100/200 **VENDOR:**
- 7B. **APPARENT OR KNOWN CAUSE OF INCIDENT:**  
Hardware trouble
8. **METHOD USED TO RESTORE SERVICE:**  
Replaced Packs
9. **STEPS TAKEN TO PREVENT RECURRENCE:**  
to be determined at root cause analysis

Pursuant to Section 0.459 (b) of the Commission Rules, and for reason set forth below,  
confidentiality is requested for items:  
Reason for confidentiality:

☐ A Request to supplement the showing requested by section 0.459 (b) is hereby made and will be  
submitted expeditiously.

**Request Supplement:**

**DATE AND TIME OF REPORT:** 02/20/2000 02:25:24 PM

**CONTACT AND TELEPHONE #:** Elaine Clauer 973-649-7440

**NOTE:** Retention period is 6 Years